

Message

**From:** Praskins, Wayne [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=4F47BC0A2C2E42A98347D59CD1A98B19-WPRASKIN]  
**Sent:** 8/24/2020 6:00:49 PM  
**To:** Robinson, Derek J CIV USN NAVFAC SW SAN CA (USA) [derek.j.robinson1@navy.mil]  
**Subject:** RE: Additional information on EPA's building RG evaluation

Derek – We plan to have ACOE prepare a final technical report but it is a work in progress. I have ORNL results in informal spreadsheets but we do not have plans for a report. If you or your folks have questions and/or want to better understand our review probably best to set up a call and I'll see if I can arrange for ACOE and ORNL staff to join.

Wayne Praskins | Superfund Project Manager  
U.S. Environmental Protection Agency Region 9  
75 Hawthorne St. (SFD-7-3)  
San Francisco, CA 94105  
415-972-3181

---

**From:** Robinson, Derek J CIV USN NAVFAC SW SAN CA (USA) <derek.j.robinson1@navy.mil>  
**Sent:** Monday, August 24, 2020 7:13 AM  
**To:** Praskins, Wayne <Praskins.Wayne@epa.gov>  
**Subject:** RE: Additional information on EPA's building RG evaluation

Thanks Wayne! We are looking at these now.

Did you receive reports/evaluations from ACOE and ORNL? If so, please share.

Derek

---

**From:** Praskins, Wayne <Praskins.Wayne@epa.gov>  
**Sent:** Thursday, August 20, 2020 5:00 PM  
**To:** Robinson, Derek J CIV USN NAVFAC SW SAN CA (USA) <derek.j.robinson1@navy.mil>  
**Subject:** [Non-DoD Source] Additional information on EPA's building RG evaluation

Derek –

I sent out our letter on the building remediation goals earlier this afternoon. This email describes the two sets of PRGs developed with the BPRG calculator mentioned in the letter (one set is for fixed contamination; the other for removable).

The first table below provides the PRGs applicable to fixed contamination calculated with the modified version of the BPRG calculator.

RGs for Fixed Contamination - Residential Exposure		
	Current HPNS RGs (dpm/ 100 cm <sup>2</sup> )	Modified RGs at 1 x 10 <sup>-4</sup> (dpm/ 100 cm <sup>2</sup> )
Am-241	100	no change
Cs-137	5000	3650
Co-60	5000	2500
Eu-152	5000	2350

<b>Eu-154</b>	5000	2900
<b>H-3</b>	5000	
<b>Pu-239</b>	100	<i>no change</i>
<b>Ra-226</b>	100	<i>no change</i>
<b>Sr-90</b>	1000	<i>no change</i>
<b>Th-232</b>	36.5	<i>no change</i>
<b>U-235</b>	488	<i>no change</i>

These PRGs reflect the following assumptions:

- Residential exposure scenario
- $1 \times 10^{-4}$  incremental cancer risk
- Contamination present only on the building floor and lower six feet of wall
- A 10 foot by 10 foot x 10 foot room size, concrete surface, and the most conservative receptor position (corner of the room)
- Retesting would need to confirm that the upper walls and ceilings are not contaminated

Six of the modified BPRGs (Am-241, Pu-239, Ra-226, Sr-90, Th-232, U-235) are similar to or higher than the building RGs in the HPNS RODs, indicating that the RGs are protective. Four of the current RGs (Cs-137, Co-60, Eu-152, Eu-154) would need to be reduced if the risk level is to remain below  $1 \times 10^{-4}$ .

The second table (below) provides BPRGs for the removable fraction.

	<b>Limits for Removable Contamination - Residential Exposure</b>	
	<b>Current Limits</b> (20% of RGs, in <i>dpm/ 100 cm<sup>2</sup></i> )	<b>Modified Limits at <math>1 \times 10^{-4}</math> (<i>dpm/ 100 cm<sup>2</sup></i>)</b>
<b>Am-241</b>	20	4.4
<b>Cs-137</b>	1000	149
<b>Co-60</b>	1000	126
<b>Eu-152</b>	1000	101
<b>Eu-154</b>	1000	204
<b>H-3</b>	1000	77,256
<b>Pu-239</b>	20	4.1
<b>Ra-226</b>	20	1.2
<b>Sr-90</b>	200	51
<b>Th-232</b>	7.3	2.4
<b>U-235</b>	97.6	4.7

These PRGs reflect default exposure assumptions and are the same values included in one of the Navy's October 2019 submittals. We are unable to support the changes to two of the default values included in the October 2019 BPRG submittals (hand to mouth frequency and fingertip surface area).

Please let me know if you have any questions or would like to discuss.

Wayne Praskins | Superfund Project Manager  
**U.S. Environmental Protection Agency Region 9**  
 75 Hawthorne St. (SFD-7-3)  
 San Francisco, CA 94105

415-972-3181